

**Work Order ID 141287****\*141287\***

Page 1

February 03, 2016 2:54:47 PM

Item ID: D2600-1-160

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Extrusion Round 3" 206

Start Date: 2/3/2016 Start Qty: 95.00

**\*95\***

Cust Item ID:

Required Date: 4/29/2016 Req'd Qty: 95.00

**\*95\***

Customer:

Reference:

Approvals:

Process Plan:

*SEA*Date: *20160203*

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr             |                      |         |        |              |               |               |                  |                |
| D2600                          | E                        |                      |         |        |              |               |               |                  |                |

100

0.00

**\*100\***

PURCHASING

FEB 16 2016

DAS  
13  
9-89

Purchasing

Memo

0.00

Purchasing

Issue P/O: *31369*

a) Extrude as per Dwg D2600 (160" long)

b) Material: 6061-T6

c) Material certification is required.

\*\*\*EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE  
SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH  
AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS,  
OR DENTS.\*\*\*

\*\*\*MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE\*\*\*

110

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

**\*110\***

Packaging

Memo

0.03

Packaging

Ensure material certification is attached

*105x 80/6-04-28*

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|-----------------------|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                               |  |                       |                                              |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  | MRB (QSI042) Approval |                                              |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |  |                       | Completed By                                 |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | Lead hand / Supervisor Approval Verification |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/>     |  |                       |                                              |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Outside Dimensions <input type="checkbox"/>   |  |                       |                                              |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Over/Under tolerance <input type="checkbox"/> |  |                       |                                              |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Incorrect <input type="checkbox"/>       |  |                       |                                              |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Part Lost/Missing <input type="checkbox"/>    |  |                       |                                              |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Part Moved <input type="checkbox"/>           |  |                       |                                              |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Drawing <input type="checkbox"/>              |  |                       |                                              |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Finish <input type="checkbox"/>               |  |                       |                                              |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Misread <input type="checkbox"/>              |  |                       |                                              |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Turning Sequence <input type="checkbox"/>     |  |                       |                                              |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> | OTHER :                                                                                                                                                                            |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |

**Work Order ID 141287**

February 03, 2016 2:54:47 PM

**\*141287\***

Page 2

Item ID: D2600-1-160

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Extrusion Round 3" 206

Start Date: 2/3/2016 Start Qty: 95.00

**\*95\***

Cust Item ID:

Required Date: 4/29/2016 Req'd Qty: 95.00

**\*95\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

120 QC18 In-Coming Inspection Material 0.00

**\*120\***

QC

Memo

0.00

Quality Control

Check Pull test per Dwg D2600 for compliance page attached Check hardness with Webster tester

105 16-04-25 DAS  
9  
9-89130 Identify as per dwg & Stock Location: Hall 0.00**\*130\***

Packaging

Memo

0.02

Packaging

|                                                                                      |
|--------------------------------------------------------------------------------------|
|  |
| P/N: <u>D2600-1-160</u>                                                              |
| W/O: <u>B141287</u>                                                                  |
| REV: <u>E</u>                                                                        |
| INSP: <u>ML5</u>                                                                     |

105 16-5-26 DAG  
19  
9-89

140 QC21- Final Inspection - Work Order Release 0.00

**\*140\***

QC

Memo

0.16

Quality Control

ML5 MAY 27 2016ML5 MAY 27 2016

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       |                                              |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       |                                              |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  | MRB (QSI042) Approval |                                              |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       | Completed By                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       | Lead hand / Supervisor Approval Verification |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       | QC / QA Coordinator Approval                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       |                                              |  |
| Root Cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                       |                                              |  |
| Environment <input type="checkbox"/><br>Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Internal Transport <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/><br>LOA <input type="checkbox"/><br>Substation <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/><br>Misidentified <input type="checkbox"/> | No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Past Due <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/><br>Cuffs <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/> | Temperature/Cure <input type="checkbox"/><br>Set-up <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Inspection Incomplete/Unqualified <input type="checkbox"/><br>Contamination <input type="checkbox"/><br>Countersink <input type="checkbox"/><br>Cut Too Short <input type="checkbox"/><br>Instructions Incomplete/Unclear <input type="checkbox"/><br>Drill Holes <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set <input type="checkbox"/><br>Mislabeled <input type="checkbox"/><br>Fit/Function <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/><br>Outside Dimensions <input type="checkbox"/><br>Over/Under tolerance <input type="checkbox"/><br>Part Incorrect <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Part Moved <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Misread <input type="checkbox"/><br>Turning Sequence <input type="checkbox"/> | OTHER : <input type="checkbox"/> |                       |                                              |  |

# Picklist Print

February 03, 2016 2:54:51 PM

Page 1

Work Order ID: 141287

**\*141287\***

Parent Item: D2600-1-160

**\*D2600-1-160\***

Parent Item Name: Extrusion Round 3" 206

Start Date: 2/3/2016

Required Date: 4/29/2016

Start Qty: 95.00

Required Qty: 95.00

Comments: IPP D: 02.09.05 Added DSK 066 KJ/RF

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D2600-1-160P                    |                        | Purchased     | No          |                     |                  | 110             | Each               | 0.0000         | 1           | 95/05        |               |                |        |
| <b>*D2600-1-160P*</b>           |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   | 105          |               |                |        |
| Extrusion Round 3" 206          |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |

8016-04-28

# SPECIFICATION CONTROL DRAWING

## D2600-X-XXX EXTRUSION

### NOTES:

1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221

MINIMUM TENSILE YIELD STRENGTH = 35 KSI  
MINIMUM ULTIMATE TENSILE STRENGTH = 40 KSI  
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N PER DART QSI 044 6.1 (FINE POINT PERMANENT INK MARKER)
- 7) WEIGHT: D2600-1 = 0.078 lb/in, D2600-3 = 0.130 lb/in, D2600-5 = 0.045 lb/in, D2600-7 = 0.091 lb/in
- 8) NO TOOLING MARKS
- 9) FOR D2600-1, PART NUMBER IS D2600-1-XXX WHERE XXX IS CUT LENGTH (EX. D2600-1-160 IS 160" LONG).  
D2600-1 EXTRUSION MANUFACTURED FROM:
  - CARADON INDALEX DIE # MH-18870
  - SIGNATURE ALUMINUM (BON-L) DIE # 897121
- 10) FOR D2600-3, PART NUMBER IS D2600-3-XXX WHERE XXX IS CUT LENGTH (EX. D2600-3-120 IS 120" LONG).  
D2600-3 EXTRUSION MANUFACTURED FROM:
  - CARADON INDALEX DIE # MH-18859
  - SIGNATURE ALUMINUM (BON-L) DIE # 897122
- 11) FOR D2600-5, PART NUMBER IS D2600-5-XXX WHERE XXX IS CUT LENGTH (EX. D2600-5-108 IS 108" LONG).  
D2600-5 EXTRUSION MANUFACTURED FROM:
  - CARADON INDALEX DIE # MS-18871
- 12) FOR D2600-7, PART NUMBER IS D2600-7-XXX WHERE XXX IS CUT LENGTH (EX. D2600-7-125 IS 125" LONG).  
D2600-7 EXTRUSION MANUFACTURED FROM:
  - CARADON INDALEX DIE # MS-18872

RELEASED  
2012-01-11

20160203

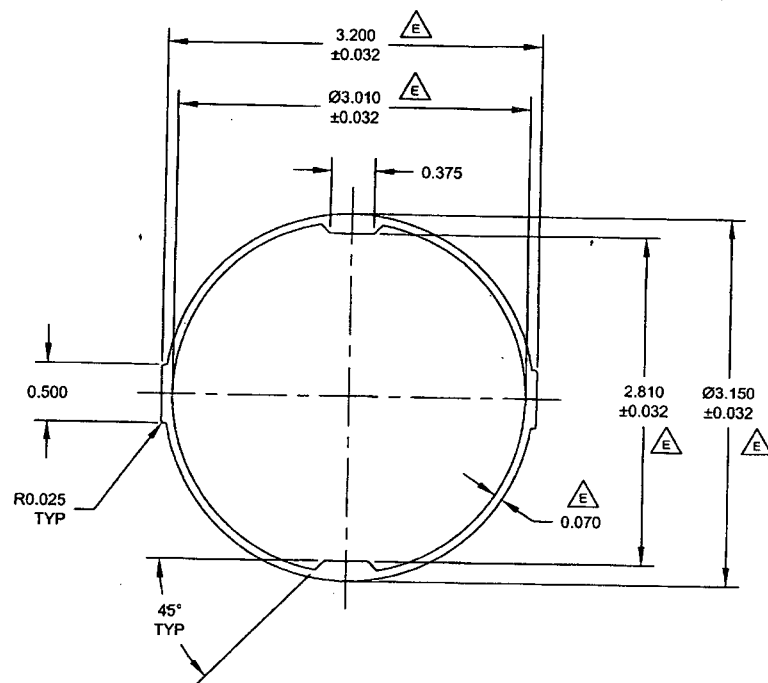
SH141287

|            |                                                                                       |    |          |
|------------|---------------------------------------------------------------------------------------|----|----------|
| E          | REFORMAT DWG; ALL DIMS & TOL. UPDATE TO MATCH MFG DIE DWGS; ADD ASTM B221 SPEC (D8-1) | CP | 11.10.18 |
| D          | INCREASE MIN. UTS TO 40 KSI                                                           | DS | 98.08.20 |
| C          | ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.                                        | DS | 98.04.16 |
| B          | CHANGE MATERIAL SPEC.                                                                 | DS | 97.09.09 |
| A          | NEW ISSUE                                                                             | DS | 97.01.21 |
| REV.       | DESCRIPTION                                                                           | BY | DATE     |
| DESIGN     |                                                                                       |    |          |
| DRAWN      |                                                                                       |    |          |
| CHECKED    |                                                                                       |    |          |
| MFG. APPR. |                                                                                       |    |          |
| APPROVED   |                                                                                       |    |          |
| DE APPR.   |                                                                                       |    |          |
| DATE       | 11.10.18                                                                              |    |          |

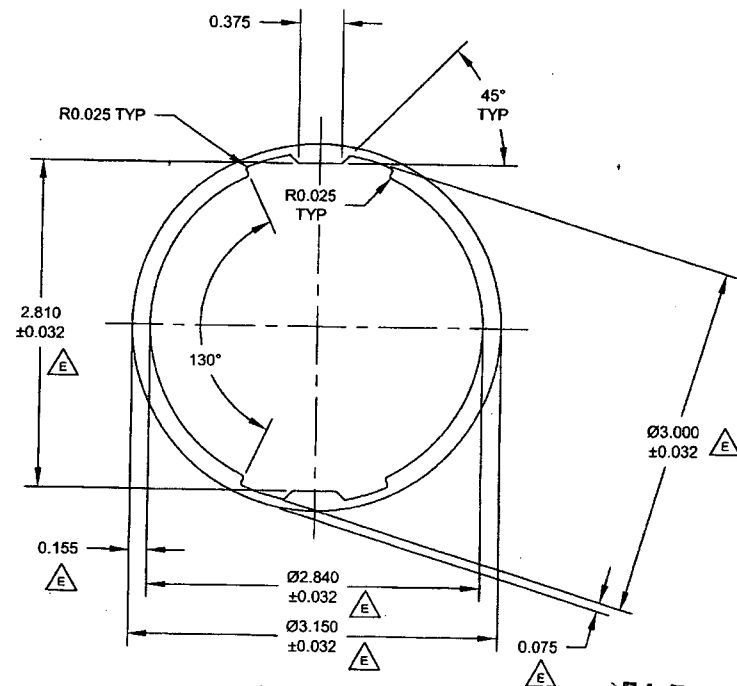
**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. E  
D2600 SHEET 1 OF 3  
TITLE SCALE  
EXTRUSION NTS

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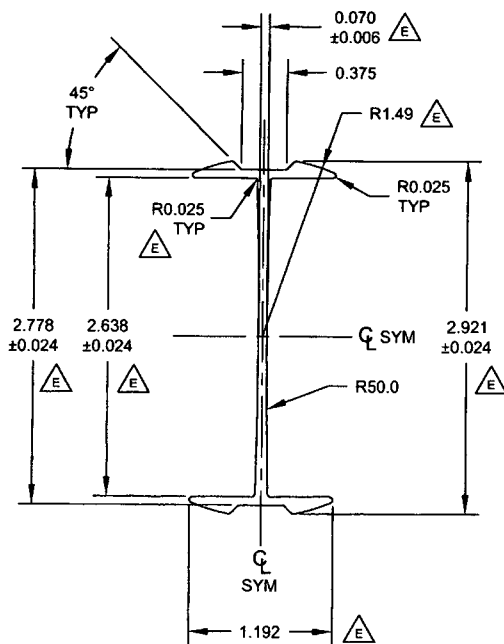
**D2600-1 EXTRUSION**



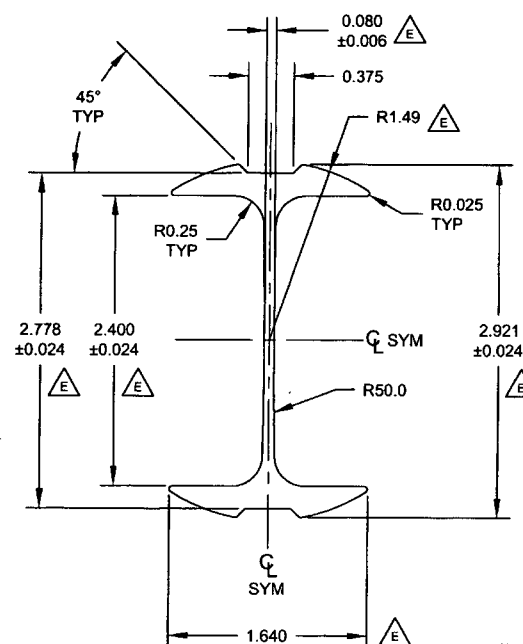
**D2600-3 EXTRUSION**

**RELEASED**  
2012-01-10

|            |                    |                                                                                                                                                                                                                                                                                                   |              |
|------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | <i>[Signature]</i> | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                          |              |
| DRAWN      | <i>[Signature]</i> |                                                                                                                                                                                                                                                                                                   |              |
| CHECKED    | <i>ASS</i>         | DRAWING NO.                                                                                                                                                                                                                                                                                       | REV. E       |
| MFG. APPR. | <i>[Signature]</i> | D2600                                                                                                                                                                                                                                                                                             | SHEET 2 OF 3 |
| APPROVED   | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                                                                             | SCALE        |
| DE APPR.   | <i>[Signature]</i> | EXTRUSION                                                                                                                                                                                                                                                                                         | NTS          |
| DATE       | 11.10.18           | <small>COPYRIGHT © 1987 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br/>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br/>WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |              |



**D2600-5 EXTRUSION**



**D2600-7 EXTRUSION**

RELEASED  
68 2012-01-11  
JMD

|            |          |                                                                                                                                                                                                                                                                                |              |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | 4        | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                       |              |
| DRAWN      | q        |                                                                                                                                                                                                                                                                                |              |
| CHECKED    | ASS      | DRAWING NO.                                                                                                                                                                                                                                                                    | REV. E       |
| MFG. APPR. | EL       | D2600                                                                                                                                                                                                                                                                          | SHEET 3 OF 3 |
| APPROVED   | #        | TITLE                                                                                                                                                                                                                                                                          | SCALE        |
| DE APPR.   | #        | EXTRUSION                                                                                                                                                                                                                                                                      | NTS          |
| DATE       | 11.10.18 | COPYRIGHT © 1997 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |





1850 Clements Road, Pickering Ontario, Canada L1W 3R8 INVOICING AND COMPANY LOCATION

Phone: (866) 587-5780 Fax: (905) 427-2207

Visit us at [www.signaturealum.com](http://www.signaturealum.com)

SIGNATURE ALUMINUM CANADA

1850 CLEMENTS ROAD

PICKERING ON L1W 3R8

PACKING LIST

ACCT# 46024

PACKING LIST DATE / DATE DU

04-21-16

PACKING LIST NUMBER / N° DE

025779

SALES ORDER NUMBER / N° DE COM

122624

SHIP TO / EXPÉDIÉ À

DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
CANADA

PHONE: 613-632-5200

SOLD TO / VENDUE À

DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
CANADA

PHONE: 613-632-5200

TERMS / FREIGHT

PP

REFER TO  
THESE NUMBERS ON  
ALL CORRESPONDANCEREFEREZ-VOUS A CES  
NUMEROUS POUR TOUTE  
CORRESPONDANCE

|                                                        |                                                     |                                     |                                                       |                                                  |                                   |                                               |                           |                                                           |                               |                                                  |                                   |
|--------------------------------------------------------|-----------------------------------------------------|-------------------------------------|-------------------------------------------------------|--------------------------------------------------|-----------------------------------|-----------------------------------------------|---------------------------|-----------------------------------------------------------|-------------------------------|--------------------------------------------------|-----------------------------------|
| CUSTOMER ID / ID DU CLIENT<br>46024                    |                                                     | ORDER DATE / DE LA COM<br>02/22/16  |                                                       | CUSTOMER PO NUMBER / CLIENT PO Nombre<br>PO31369 |                                   | JOB / FICHIER                                 |                           | FIELD SALES REP / REP REGIONAL DES VENTES<br>G.ATTENBOROU |                               | CUST SERVICE REP / REP. SERVICE CLIENTELE<br>M2A |                                   |
| BILL OF LADING NUMBER / NO. DE CONNAISSEMENT<br>025779 |                                                     | CARRIER / TRANSPORTEUR<br>MCGILLION |                                                       | SALES MAN / VENDEUR<br>042                       |                                   | TRAILER NUMBER / REMORQUE Nombre<br>MCGILLION |                           | LOCATION<br>PIC                                           |                               | SALES REP / REP. DES VENTES<br>R. BLAIS          |                                   |
| ITEM NO. / NUMÉRO                                      | ORIGINAL ORDER QUANTITY / Quantité d'ordre ORIGINAL | UNIT / UNITÉ                        | PREVIOUS SHIPPED QUANTITY / PRÉCÉDENT Quantité livrée | MFG. PART NUMBER / MFG. PARTIE NUMÉRO            | ALLOY & TEMPER / ALLIAGE & TEMPER | FINISH DESCRIPTION / DESCRIPTION DE FINITION  | NBR OF PKGS / NBR DE PKGS | GROSS LBS / LIVRES BRUT                                   | NET QUANTITY / QUANTITÉ NETTE | UNIT / UNITÉ                                     | QUANTITY DUE / Quantité en raison |
| 001                                                    | 1,268                                               | LB                                  |                                                       | DAA-897121-1                                     | 6061 T6                           |                                               | 3                         | 1,400                                                     | 1,290                         | LB                                               |                                   |
|                                                        | 575                                                 | KG                                  |                                                       | D2600-1-160P                                     | 160.0000                          | IN                                            |                           | 635                                                       | 585                           | KG                                               |                                   |
|                                                        | 95                                                  | PC                                  |                                                       |                                                  | Cut(+): 0.1180                    | Cut(-): 0.0000                                |                           |                                                           | 105                           | PC                                               |                                   |
|                                                        |                                                     |                                     |                                                       |                                                  | Min: -10 %                        | Max: 10 %                                     |                           |                                                           |                               |                                                  |                                   |
|                                                        |                                                     |                                     |                                                       |                                                  |                                   |                                               | 862833 / 305034           | 1                                                         | 441                           | 401                                              | 33 PC                             |
|                                                        |                                                     |                                     |                                                       |                                                  |                                   |                                               | 862833 / 305035           | 1                                                         | 441                           | 401                                              | 33 PC                             |
|                                                        |                                                     |                                     |                                                       |                                                  |                                   |                                               | 862833 / 305040           | 1                                                         | 518                           | 487                                              | 39 PC                             |

Sp/6-04-25

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping packing lists and signed and dated below by customers authorized representatives.  
No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping packing list were produced in accordance with the fair labor standards act of 1938 as amended. Order accepted subject to the terms and conditions stated on the reverse side.

CUSTOMER ACKNOWLEDGEMENT OF GOODS DELIVERED AND CONDITION

Page 1

DATE OF DELIVERY

DRIVER

|        |  |           |  |
|--------|--|-----------|--|
|        |  | Continued |  |
| TOTALS |  |           |  |

**SIGNATURE ALUMINUM CANADA**1850 CLEMENTS RD  
PICKERING, ON L1W 3R8**CERTIFICATE OF COMPLIANCE**

| Cert Date  | Cert No. | Sales Order | Page     |
|------------|----------|-------------|----------|
| 04/14/2016 | 5383398  | 122624      | 1        |
| Cust PO    | B/L No   | Lot         | Date     |
| PO31369    | 025779   | 862833      | 04/21/16 |

| Sold To                                                                               | Ship To                                                                               |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 46024<br>DART AEROSPACE LTD.<br>1270 ABERDEEN ST.<br>HAWKESBURY, ON K6A 1K7<br>CANADA | 46024<br>DART AEROSPACE LTD.<br>1270 ABERDEEN ST.<br>HAWKESBURY, ON K6A 1K7<br>CANADA |

| Item No                              | Part No                  | Item Description  | Cust Part    |
|--------------------------------------|--------------------------|-------------------|--------------|
| 001                                  | DAA-897121-1             | 160" Mill 6061 T6 | D2600-1-160P |
| Gross Weight                         | 1,400 LBS                |                   |              |
| Net Qty                              | 1,290 LBS 105 PCS 3 PKGS |                   |              |
| Specification                        |                          |                   | Die Desc     |
| AMS-QQ-A-200/8 & ASTM B221-08<br>DAS |                          |                   |              |

Mechanical Tests:

9-89

| Tensile      | Yield        |              |              |     |
|--------------|--------------|--------------|--------------|-----|
| MPA / KSI    | MPA / KSI    | % Elongation | Conductivity | HRE |
| 295.9 / 42.9 | 264.2 / 38.3 | 10.5         | N/A          | 90  |

Chemical Analysis:

| Si   | Fe   | Cu   | Mn   | Mg   | Cr   | Zn   | Ti   | V    | Zr   |
|------|------|------|------|------|------|------|------|------|------|
| 0.69 | 0.19 | 0.23 | 0.05 | 0.89 | 0.06 | 0.15 | 0.02 | 0.01 | 0.00 |

*This Material is Made in Canada**This Material is RoHS Compliant*

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Mazzotta  
Director of Quality  
Signature Aluminum Canada Inc

ISO 9001/TS16949 Registered Company

Visit us at [www.signaturealum.com](http://www.signaturealum.com)



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID PO31369

Purchase Order Date 2/16/2016

PO Print Date 2/16/2016

Page Number 1 of 2

Order From :  
SIGNATURE ALUMINUM CANADA INC.  
C/O/ T10322C  
P.O. BOX 4488, STN A  
TORONTO, ON M5W 4H1  
CA

VC-BON001

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**E-MAILED**  
FEB 17 2016

Contact Name  
Vendor Phone 905-427-6550

Ship To Contact  
Ship To Phone  
Ship Via: Yours ppd  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB Destination-Collect

| Line Nbr          | Reference Vendor Part Number                                       | Description/ Mfg ID    | Req Date/ Taxable | CD | Req Qty/ Unit of Measure | PO Unit Price | Extended Price |
|-------------------|--------------------------------------------------------------------|------------------------|-------------------|----|--------------------------|---------------|----------------|
| Line Comments     |                                                                    | Promise Date           |                   |    |                          |               |                |
| Delivery Comments |                                                                    |                        |                   |    |                          |               |                |
| 1                 | D2600-1-160P                                                       | Extrusion Round 3" 206 | 4/28/2016         |    | 95.00                    | \$28.29       | \$2,687.55     |
|                   |                                                                    |                        | Yes               |    | Each                     |               |                |
|                   |                                                                    |                        | DAS 4/28/2016     |    |                          |               |                |
|                   |                                                                    |                        | 9                 |    |                          |               |                |
|                   |                                                                    |                        | 9-89              |    |                          |               |                |
|                   | EXTRUDE AS PER DWG D2600 REV. E                                    |                        |                   |    |                          |               |                |
|                   | B141287                                                            |                        |                   |    |                          |               |                |
|                   | EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF TUBE  |                        |                   |    |                          |               |                |
|                   | MATERIAL MUST BE SMOOTH AND FREE FROM DEFECT SCRATCHES,NICKS,DENTS |                        |                   |    |                          |               |                |
|                   |                                                                    |                        |                   |    |                          | Line Total:   | \$2,687.55     |
| 2                 | D2622-120CP                                                        | Extrusion              | 4/28/2016         |    | 120.00                   | \$18.49       | \$2,218.80     |
|                   |                                                                    |                        | Yes               |    | Each                     |               |                |
|                   |                                                                    |                        | 4/28/2016         |    |                          |               |                |
|                   | EXTRUDE AS PER DWG D2622 REV. C                                    |                        |                   |    |                          |               |                |
|                   | B141814                                                            |                        |                   |    |                          |               |                |
|                   | EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF TUBE  |                        |                   |    |                          |               |                |
|                   | MATERIAL MUST BE SMOOTH AND FREE FROM DEFECT SCRATCHES,NICKS,DENTS |                        |                   |    |                          |               |                |
|                   |                                                                    |                        |                   |    |                          | Line Total:   | \$2,218.80     |

Note:

2/16/2016

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 52600-1-160  
 DATE: 16-04-25

PO / BATCH NO.: P031369 / B141287

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 105 pcs  
 QUANTITY INSPECTED: 105 pcs  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .070  
 THICKNESS RECEIVED: \_\_\_\_\_  
 SHEET SIZE ORDERED: \_\_\_\_\_  
 SHEET SIZE RECEIVED: \_\_\_\_\_

| DESCRIPTION                                        | NCR<br>(Check<br>Y/N) | COMMENTS      |
|----------------------------------------------------|-----------------------|---------------|
| SURFACE DAMAGE                                     | Y (N)                 |               |
| CORRECT FINISH                                     | (Y) N                 |               |
| CORROSION                                          | Y (N)                 |               |
| CORRECT GRAIN DIRECTION                            | (Y) N                 |               |
| CORRECT MATERIAL                                   | (Y) N                 |               |
| CORRECT THICKNESS                                  | (Y) N                 |               |
| PHOTO REQUIRED                                     | Y (N)                 |               |
| CORRECT MATERIAL                                   | (Y) N                 | AMS-QQ-A200/B |
| CORRECT REF # TO LINK CERT                         | (Y) N                 | P031369       |
| CORRECT MATERIAL IDENTIFICATION                    | (Y) N                 |               |
| CORRECT M# ON THE MATERIAL                         | (Y) N                 |               |
| DOES THIS MATERIAL REQUIRE<br>ENGINEERING SIGN OFF | Y (N)                 |               |
| DOES THIS REQUIRE AN<br>EXTRUSION REPORT           | Y (N)                 |               |

| CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.<br>RECORD RESULTS BELOW |     |     |       |       |  |
|------------------------------------------------------------------------------------|-----|-----|-------|-------|--|
| TYPE OF MATERIAL<br>SIZE OF TEST SAMPLE<br>HARDNESS / DUROMETER READING            | HRC | HRB | DUR A | DUR D |  |
|                                                                                    |     |     |       |       |  |
|                                                                                    |     |     |       |       |  |

testers located in the Quality Office

|                                                    |                                     |                                           |  |
|----------------------------------------------------|-------------------------------------|-------------------------------------------|--|
| <b>QC 18 INSPECTION</b>                            |                                     | <b>ENGINEERING SIGN OFF (if required)</b> |  |
| INSPECTED BY: <u>9-89</u><br>DATE: <u>16-04-25</u> | SIGNED OFF BY: _____<br>DATE: _____ |                                           |  |

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

